

I claim:

1. A radio signal relay for integrating selected radio signals and extending transmission distances of the selected radio signals comprising a receiver and transmitter, a signal processing unit, an input output bus unit, a processing unit, a memory unit, a signal amplification unit and an antenna, wherein:

the receiver and transmitter receives and transmits the selected radio signals, and isolates the interference of non-selected radio signals;

the signal processing unit processes the signals received by the receiver and transmitter;

the input output bus unit controls data transmission among the units in the radio signal relay, the data including the received radio signals and data in the radio signal relay;.

the processing unit controls and coordinates operations of the units in the radio signal relay and performs multiplex processing for the signals;

the memory unit stores selected setting data and programs of the radio signal relay, and temporarily stores the received data signals;

the signal amplification unit processes the radio signals to be relayed in the radio signal relay and furnishes the processed signals for rear end transmitting; and

the antenna receives the selected radio signals and transmits the radio

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